SERVICE MANUAL 3250B

marantz

model 3250B

Stereo Control Console

marantz

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail prive quotation on available parts in order to advise them of the cost of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

CANADA

Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

Superscope (Australasia) Pty., Ltd.
32 Cross Street (P.O. Box 604)
Brookvale 2100 N.S.W.
Australia

JAPAN

Marantz Japan, Inc.
3622 Kamitsuruma
Sagamihara Shi
Kanagawa, Japan

EUROPE

Superscope Europe, S.A.
Avenue Leopold III, 2
7120 Peronnes-Lez-Binche
Belgium

Marantz France
Rue Louis Armand 9
92600 Asnieres
Hauts-de-Seine
France

Marantz Audio U.K. Ltd.
London Road, 203
Staines
Middlesex
England

Superscope GmbH
Max-Planck-Strasse 22
D-6072 Dreieich 1
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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We sound better.

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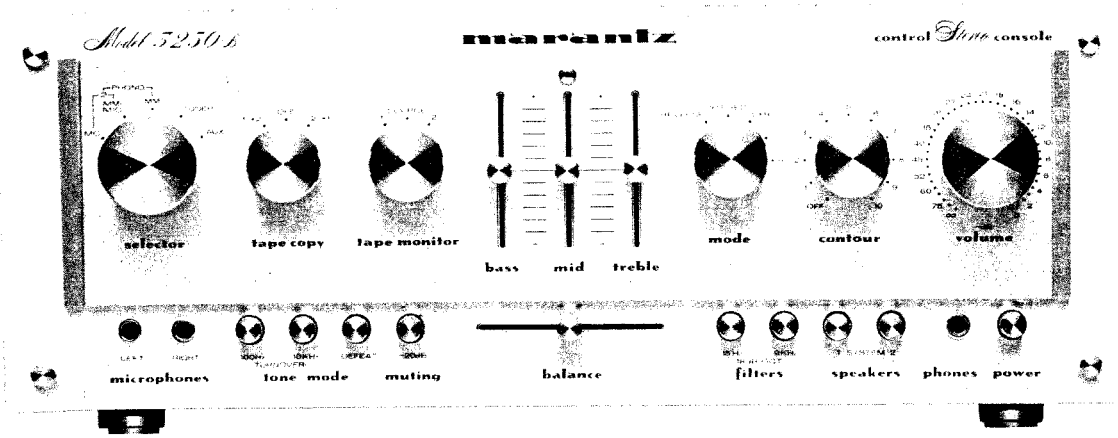


1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 3250B Stereo Control Console.
Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.
The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

2. P.W. BOARD

As can be seen from the circuit diagram, the chassis of Model 3250B consists of following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. **Tone-Amp. Ass'y ..... mounted on P.W.B. PJ 01**
2. **Tone Control, Filter Ass'y ..... mounted on P.W.B. PS 01**
3. **Input Terminal Ass'y ..... mounted on P.W.B. PV01**
4. **Speaker/Headphone Ass'y ..... mounted on P.W.B. PW01**
5. **Fuse Ass'y ..... mounted on P.W.B. PP 01**
6. **Loudness Control Ass'y ..... mounted on P.W.B. PF 01**

3. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 3250B Stereo Control Console.

Item	Manufacturer and Model No.	Use
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700B	Distortion measurements Sinewave and swuarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B – 10 A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600 ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup

4. ALIGNMENT PROCEDURES

1. Set the VOLUME control at maximum, and also BASS, MID, TREBLE and BALANCE Controls at mechanical center position.
2. Connect 47 kΩ dummy load resistor to each R and L channel on PRE OUT jacks of the unit.

ITEM	SIGNAL APPLICATION	INDICATOR CONNECTION
CHECK OF THE TECHNICAL SPEC.	PHONO, AUX, TAPE	TAPE OUT, PRE OUT

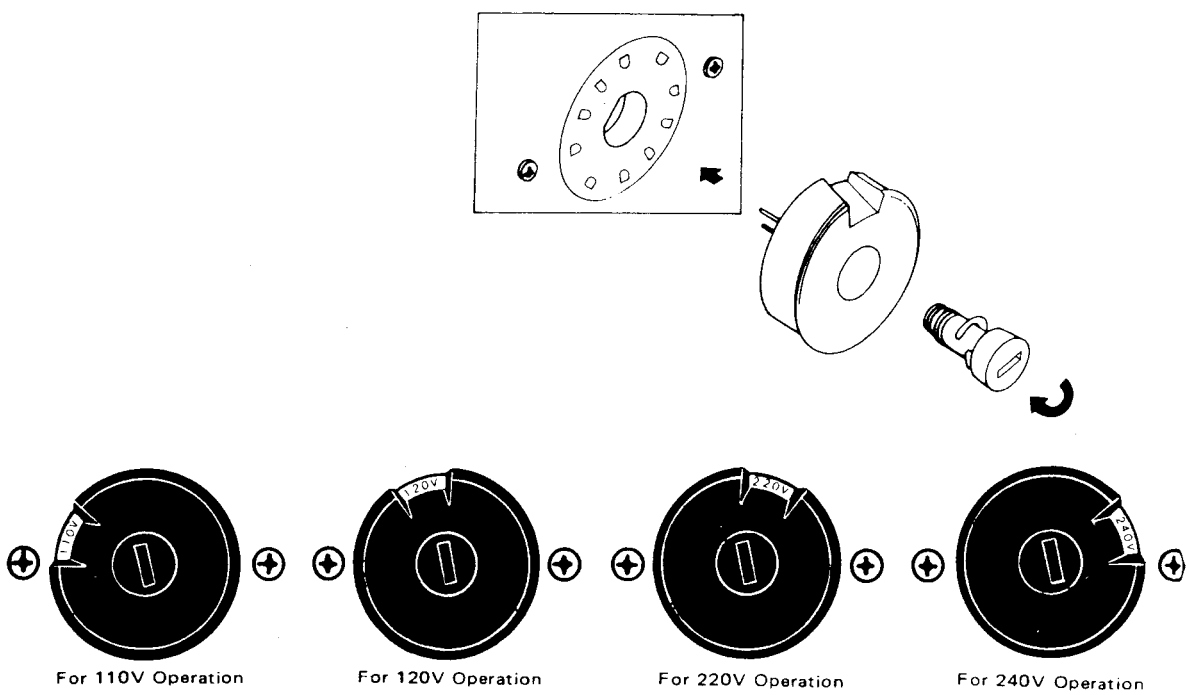
5. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

This Model is equipped with a universal power transformer to permit operation at 110, 120, 220 and 240V AC 50/60 Hz.
To convert the unit to the required voltage, set the plug as illustrated so that you can adjust the voltage as required.

CAUTION

DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.



For 110V Operation | For 120V Operation | For 220V Operation | For 240V Operation

6. BLOCK DIAGRAM

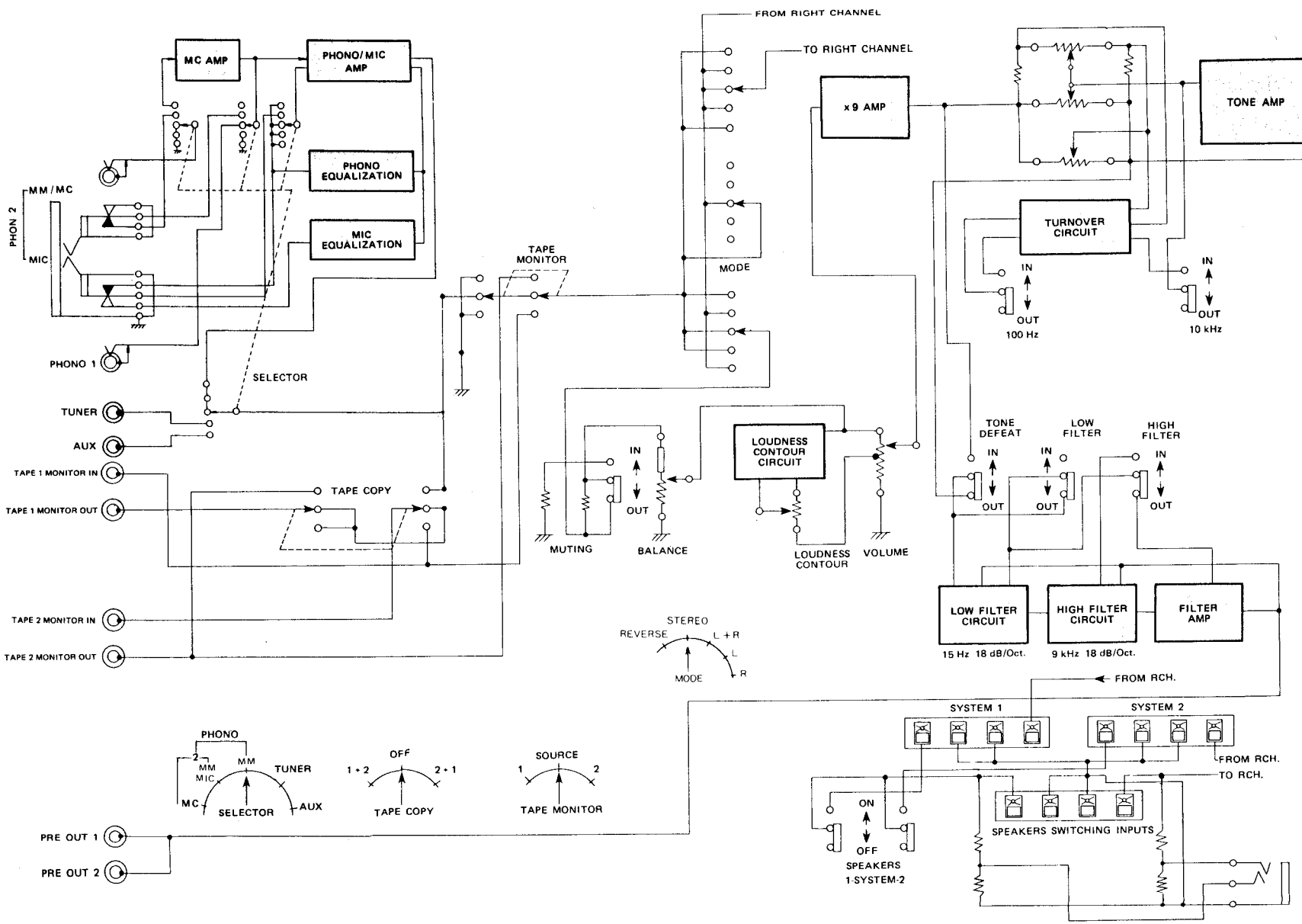
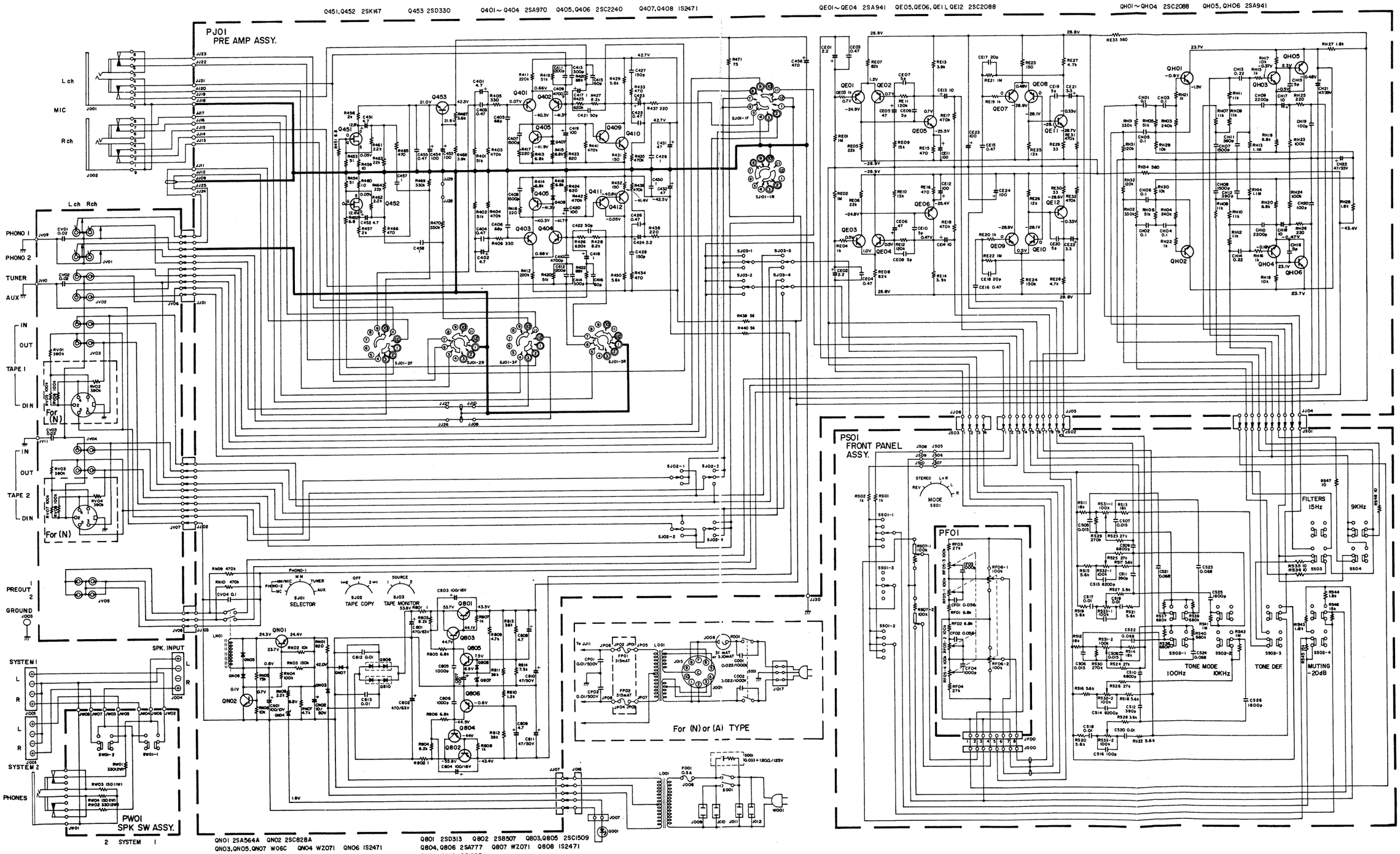


Figure 10. Functional Block Diagram

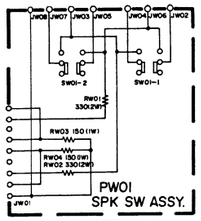
7. SCHEMATIC DIAGRAM

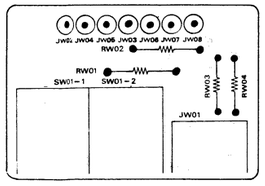
Model 3250B



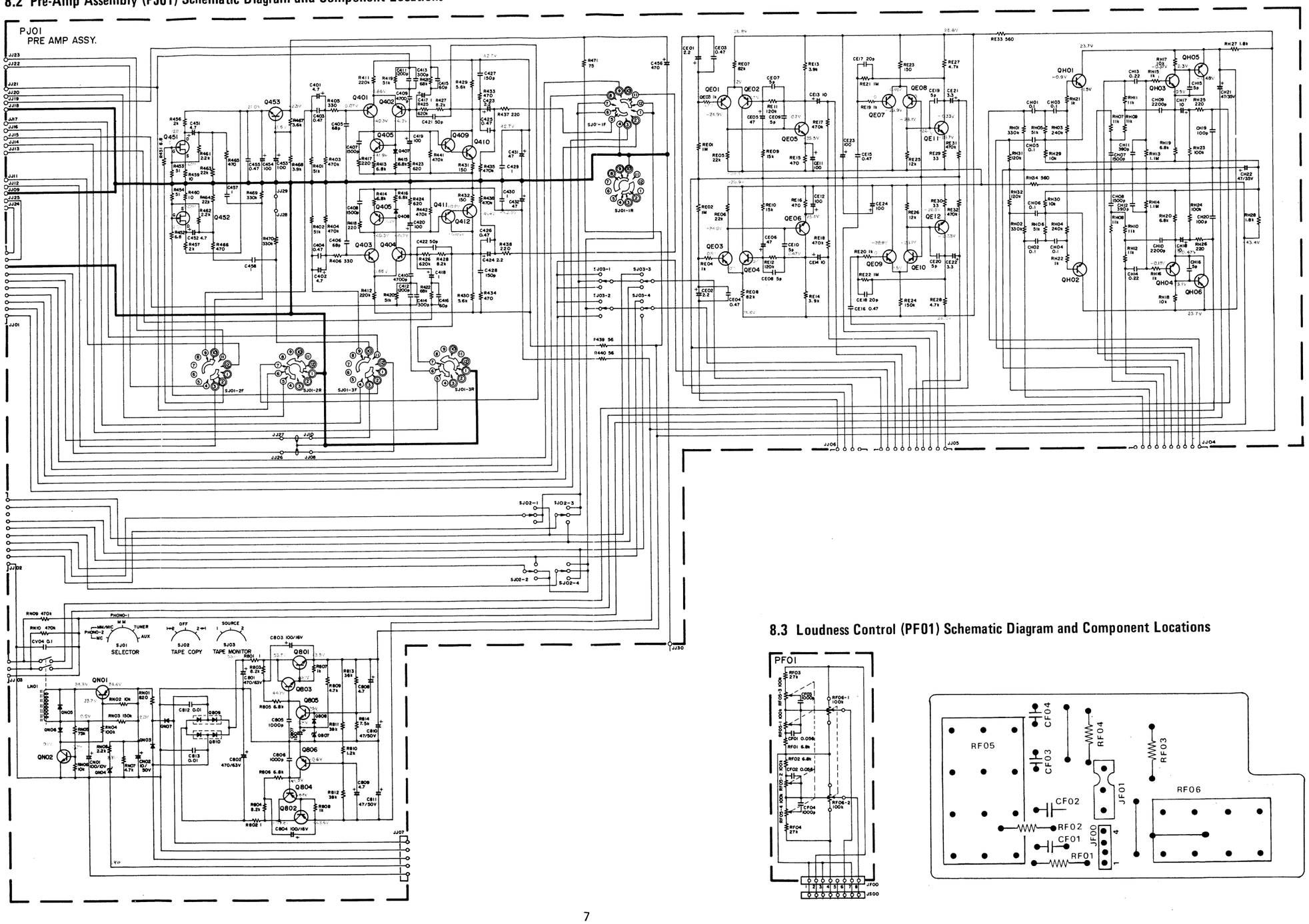
8. DIAGRAM AND COMPORNENT LOCATIONS

8.1 SPK/Headphone Assembly (PW01) Schematic Diagram and Component Locations

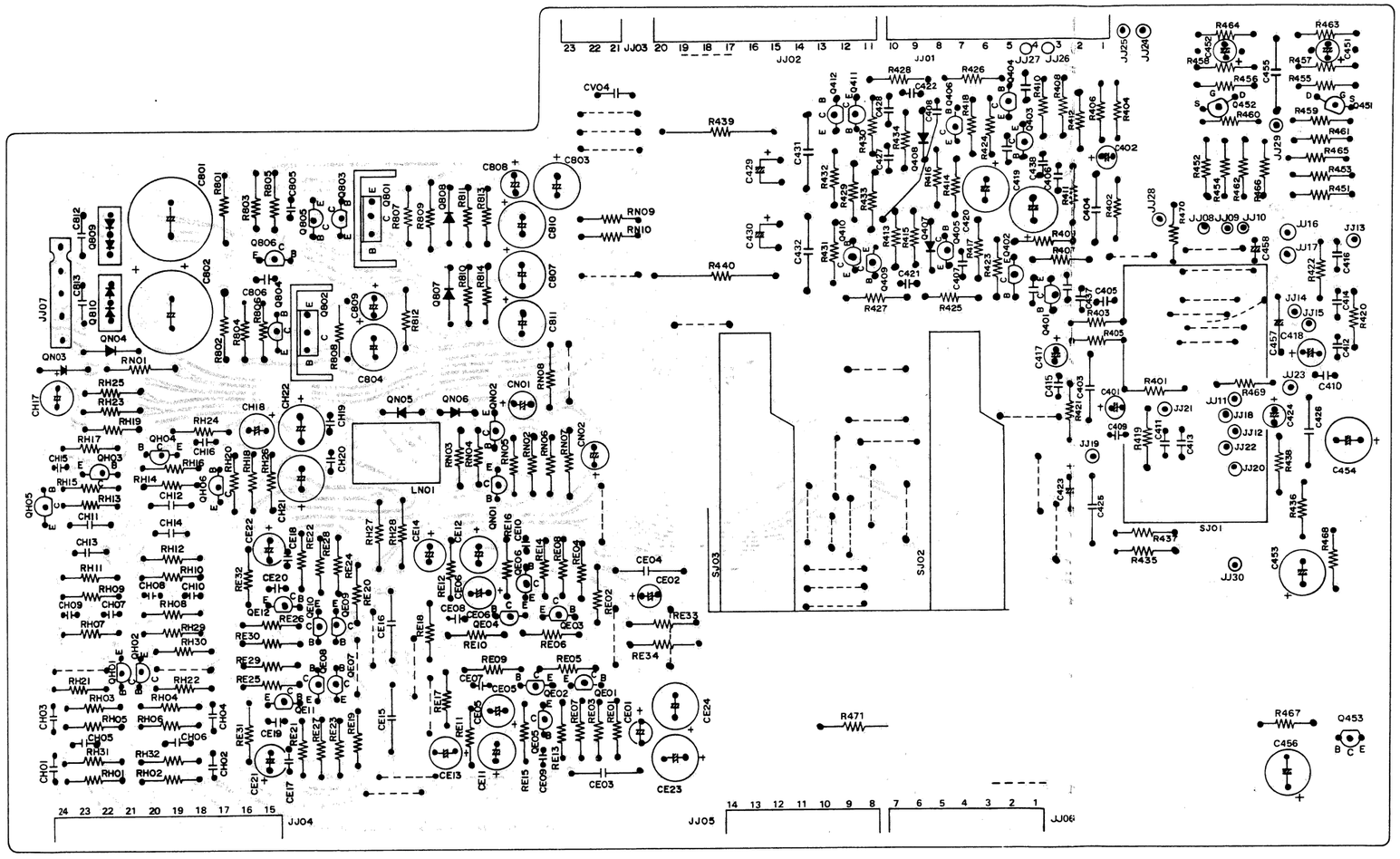




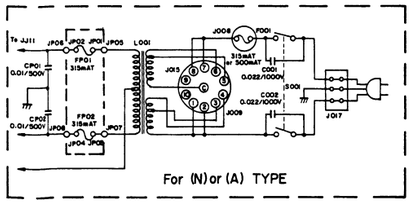
8.2 Pre-Amp Assembly (PJ01) Schematic Diagram and Component Locations



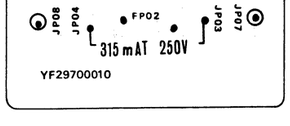
8.3 Loudness Control (PF01) Schematic Diagram and Component Locations



8.4 Fuse Assembly (PP01) Schematic Diagram and Component Locations

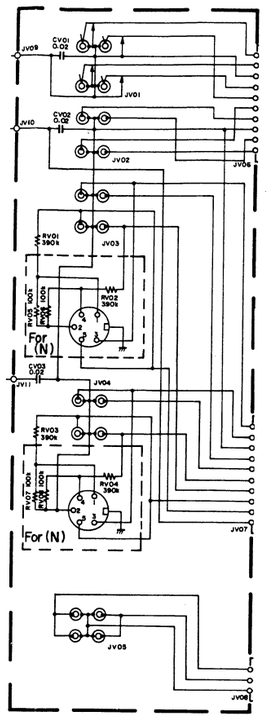


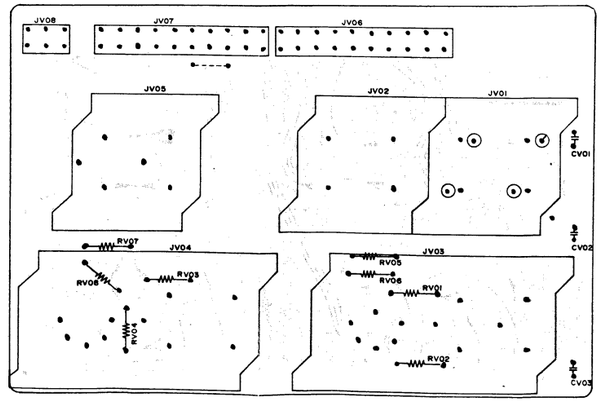
CAUTION ;
REPLACE ONLY WITH SAME TYPE FUSE



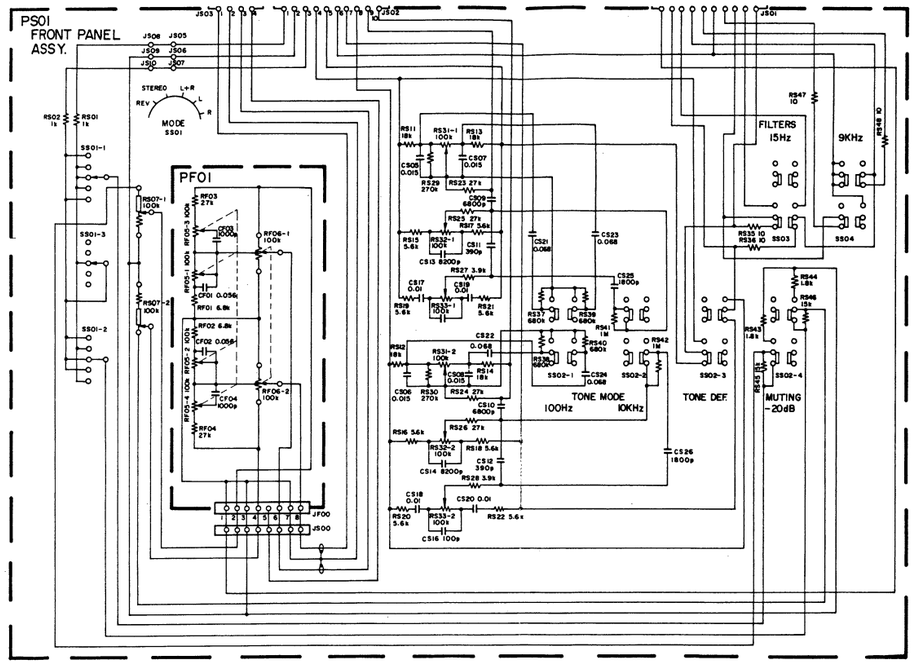
YF29700010

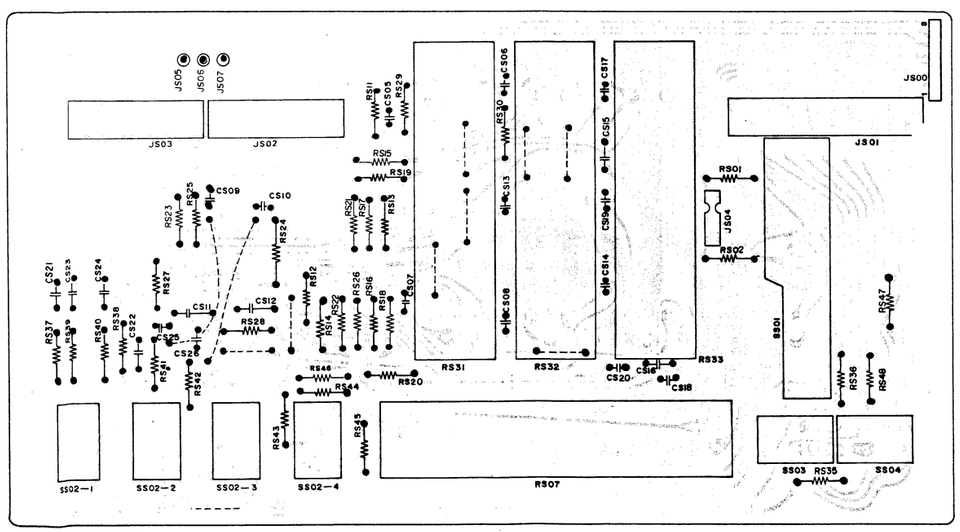
8.5 Input Terminal (PV01) Schematic Diagram and Component Locations





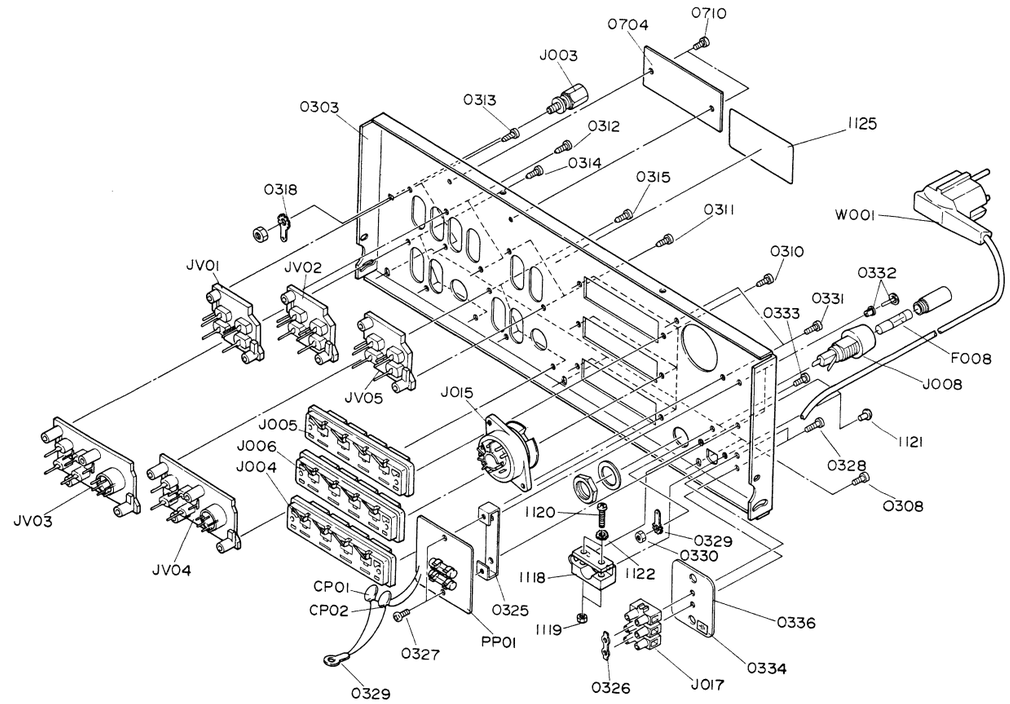
8.6 Tone Control Filter (PS01) Schematic Diagram and Component Locations

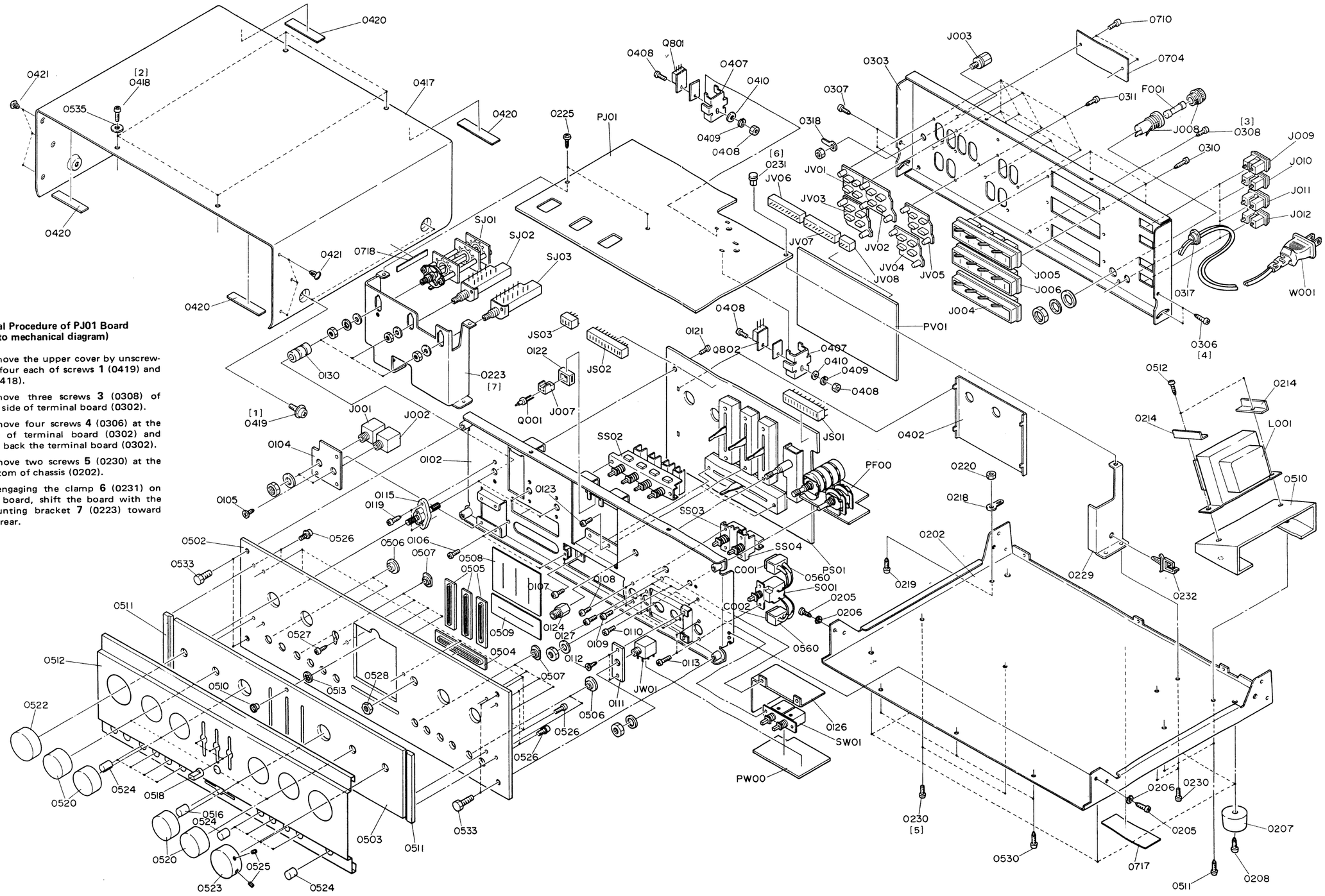




9. EXPLODED MECHANICAL DIAGRAM

9.1 Rear Panel for Europe only

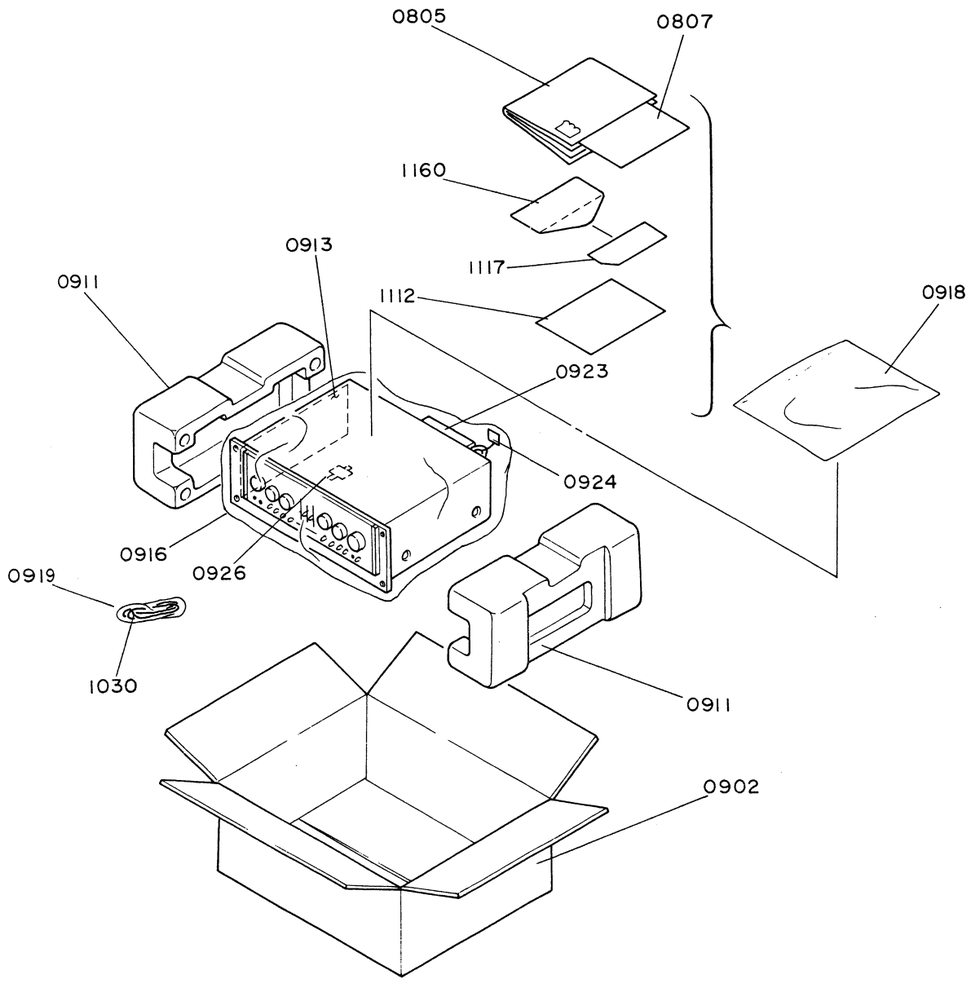




Removal Procedure of PJ01 Board (Refer to mechanical diagram)

1. Remove the upper cover by unscrewing four each of screws **1** (0419) and **2** (0418).
2. Remove three screws **3** (0308) of rear side of terminal board (0302).
3. Remove four screws **4** (0306) at the side of terminal board (0302) and fold back the terminal board (0302).
4. Remove two screws **5** (0230) at the bottom of chassis (0202).
5. Disengaging the clamp **6** (0231) on the board, shift the board with the mounting bracket **7** (0223) toward the rear.

10. PACKING MATERIAL EXPLODED VIEW



11. PARTS LIST

- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
A	1	1	1	2464063400	Front Panel Assembly
0502	1	1	1	2464063010	Escutcheon Main
0503	1	1	1	2464063020	Escutcheon Sub
0504	1	1	1	2926259040	Bushing
0505	3	3	3	2970259010	Bushing
0506	3	3	3	2978259020	Bushing
0507	9	9	9	2978259012	Bushing
0508	1	1	1	2970303010	Mask
0509	1	1	1	2926303020	Mask
0510	1	1	1	2979259022	Bushing
0511	2	2	2	2965063050	Escutcheon
0513	1	1	1	6402060QQ0	R.G. Ring
0526	10	10	10	51480306A9	F. Washer Screw, F3 x 6
PF11	3	3	3	75061251P0	Jumper
PJ08	30	30	30	2933118020	Spacer
PJ11	35	35	35	75061251P0	Jumper
PJ12	1	1	1	75060751P0	Jumper
PJ13	1	1	1	75061001P0	Jumper
PJ14	1	1	1	75061501P0	Jumper
PS12	9	9	9	75061251P0	Jumper
PV11	1	1	1	75061001P0	Jumper
PW07	8	8	8	3444118050	Spacer
0102	1	1	1	2970160015	Bracket
0104	1	1	1	2970120010	Insulator
0105	3	3	3	51340306B0	F.H. Tapped Screw, F3 x 6
0106	2	2	2	51100306A9	B.H.M. Screw B3 x 6
0107	2	2	2	51100306A9	B.H.M. Screw B3 x 6
0108	2	2	2	51100306A9	B.H.M. Screw B3 x 6
0109	2	2	2	51100306A9	B.H.M. Screw B3 x 6
0110	2	2	2	51100306A9	B.H.M. Screw, B3 x 6
0111	1	1	1	2970120020	Insulator
0112	2	2	2	51340306B0	F.H. Tapped Screw, F3 x 6
0113	2	2	2	51100306A9	B.H.M. Screw, B3 x 6
0114	2	2	2	51040306B9	F.H.M. Screw, F3 x 6
0115	3	3	3	2970112510	Shaft
0116	3	3	3	2970112013	Shaft
0117	3	3	3	2970106013	Sustainer
0118	3	3	3	64000400R0	R.G. Ring, E
0119	6	6	6	51280308B0	B.H. Tapped Screw, B3 x 8
0120	3	3	3	64054800R0	R.G. Ring, CT
0121	1	1	1	51280306B0	B.H. Tapped Screw, B3 x 6
0122	1	1	1	2978259060	Bushing
0123	3	3	3	51100306A9	B.H.M. Screw, B3 x 6
0124	1	1	1	2970101010	Support
0126	1	1	1	2970109010	Shield
0127	2	2	2	51100306A9	B.H.M. Screw, B3 x 6
0130	3	3	3	2963125010	Joint
0202	1	1	1	2970105016	Chassis

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
0204	3	3	3	51280410U0	B.H. Tapped Screw, B4 x 10
0205	2	2	2	51290308B0	B.H. Tapped Screw, B3 x 8
0206	2	2	2	54050300R0	T.L. Washer, OR
0207	4	4	4	2932057010	Leg
0208	4	4	4	51570410S0	P. Tapped Screw, P4 x 10
0214	2	2	2	2979005010	Clamper
0215	2	2	2	51100408S9	B.H.M. Screw, B4 x 8
0218	1	1	1	62030049W0	Lug
0219	1	1	1	51100306S9	B.H.M. Screw, B3 x 6
0220	1	1	1	53110303B9	Hexagon Nut
0221	1	1	1	1382005030	Clamper
0223	1	1	1	2464160010	Bracket
0224	2	2	2	51100306S9	B.H.M. Screw, B3 x 6
0225	2	2	2	51280306B0	B.H. Tapped Screw, B3 x 6
0229	1	1	1	2970160040	Bracket
0230	2	2	2	51100306S9	B.H.M. Screw, B3 x 6
0231	1	1	1	2965005010	Clamper
0232	1	1	1	2886005020	Clamper
0302	1	1		2464160210	Bracket
0303			1	2464160223	Bracket
0306	2	2	2	51290308B0	B.H. Tapped Screw, B3 x 8
0307	2	2	2	51280306U0	B.H. Tapped Screw, B3 x 6
0308	3	3	3	51280306U0	B.H. Tapped Screw, B3 x 6
0310	6	6	6	51280308U0	B.H. Tapped Screw, B3 x 8
0311	10	10	10	51280308U0	B.H. Tapped Screw, B3 x 8
0317	1	1		1455259070	Bushing
0318	1	1	1	62040029W0	Lug
0325			1	2854160030	Bracket
0326			1	2970005010	Clamper
0327			2	51100306A9	B.H.M. Screw, B3 x 6
0328			2	51100314S9	B.H.M. Screw, B3 x 14
0329			1	62030039W0	Lug
0330			1	53110303A9	Hexagon Nut
0331			2	51100308S9	B.H.M. Screw, B3 x 8
0332			2	2912259020	Bushing
0333			1	51100306S9	B.H.M. Screw, B3 x 6
0334			1	2882861020	Label
0335			1	62030039W0	Lug
0336			1	2970120040	Insulator
0402	1	1	1	2970109020	Shield
0407	2	2	2	2963267020	Heatsink
0408	2	2	2	51280306B0	B.H. Tapped Screw, B3 x 6
0417	1	1	1	2970257112	Lid
0418	4	4	4	51280306U0	B.H. Tapped Screw, B3 x 6
0419	4	4	4	51480406S9	F. Washer Screw, F4 x 6
0420	4	4	4	2965118010	Spacer
0421	6	6	6	2991259010	Bushing
0490	1	1	1	2886005020	Clamper
0500	1	1	1	2464053010	Cover
0502	1	1	1	2464063010	Escutcheon
0503	1	1	1	2464063023	Escutcheon
0504	1	1	1	2926259040	Bushing
0505	3	3	3	2970259010	Bushing
0506	3	3	3	2978259020	Bushing
0507	9	9	9	2978259010	Bushing
0508	1	1	1	2970303010	Mask
0509	1	1	1	2926303020	Mask

- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
0510	1	1	1	2464160110	Bracket
0510	1	1	1	2979259020	Bushing
0511	2	2	2	5128040880	B.H. Tapped Screw, B4 x 8
0512	2	2	2	51470408A9	L. Washer Screw, L4 x 8
0513	1	1	1	64020600Q0	R.G. Ring, CS
0516	1	1	1	2970154010	Knob
0518	3	3	3	2970154024	Knob
0520	4	4	4	2970154050	Knob
0522	1	1	1	2963154010	Knob
0523	1	1	1	2963154040	Knob
0524	9	9	9	2963154030	Knob
0525	2	2	2	51690306Q9	Socket Screw, HP
0526	6	6	6	51480306A9	F. Washer Screw, F3 x 6
0527	1	1	1	5130260880	P.H. Tapped Screw, P2.6 x 8
0528	1	1	1	53118179A0	Hexagon Nut
0530	6	6	6	5128C406U0	B.H. Tapped Screw, B4 x 6
0533	4	4	4	52017069J0	H. Head Bolt
0535	4	4	4	59030805P1	Washer
0560			2	3926120010	Insulator
0702	1			2464265010	Indicator
0703		1		2464265020	Indicator
0704			1	2464265030	Indicator
0710	2	2	2	5176030680	OS Tapped Screw, O3 x 6
0714		1		2911861110	Label
0715		1		2911861143	Label
0717	1		1	2578861010	Label
0718	1		1	2932861010	Label
0723	1			9511101040	Label
0724		1		2457861040	Label
0727		1		2911861230	Label
0804	1			2464851010	Instructions
0805		1	1	2464851312	Instructions
0806	1			2464851020	Instructions
0807			1	2464851030	Instructions
0808		1		2464851050	Instructions
0809		1		2886851100	Instructions
0902	1		1	2464801010	Packing Case
0902		1		2464801150	Packing Case
0911	2	2	2	2970809010	Cushion
0913	1	1	1	2918107160	Sheet
0916	1	1	1	9014550180	Polyethylene Bag
0918	1	1	1	9013025010	Polyethylene Bag
0919	1	1	1	9011325010	Polyethylene Bag
0923	1	1	1	2864804010	Sleeve
0924			1	9560000043	Hang Tag
0926			1	2731821010	Silicagel
1002	3			9526019010	Serial No. Card
1003		3		9526019020	Serial No. Card
1004			3	9526019060	Serial No. Card
1014		2		9510901020	Label
1030	1	1	1	ZD01500160	Connective Cord
1105		1		2918813010	Envelope
1106			1	2818813010	Envelope
1117		1	1	9630000180	Guarantee Card
1118			1	2821259010	Bushing
1119			2	53110303A9	Hexagon Nut
1120			2	51060312A9	P.H.M. Screw P3 x 12

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
1121			2	55060305S0	T.R. Rivet
1121		1		9650000050	S. Station Card
1122			2	54050300R0	T.L. Washer, OR
1125	1			2818854024	Guarantee Card
1125			1	2970861010	Label
1126		1		2818854040	Guarantee Card
1126			1	54050400A0	T.L. Washer, OR
1135	1			2225813010	Envelope
CE01	1	1	1	EE22505040	Electrolytic Cap., 2.2μF 50V
CE02	1	1	1	EE22505040	Electrolytic Cap., 2.2μF 50V
CE03	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
CE04	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
CE05	1	1	1	EE47601040	Electrolytic Cap., 47μF 10V
CE06	1	1	1	EE47601040	Electrolytic Cap., 47μF 10V
CE07	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE08	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE09	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE10	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE11	1	1	1	EA10701090	Electrolytic Cap., 100μF 10V
CE12	1	1	1	EA10701090	Electrolytic Cap., 100μF 10V
CE13	1	1	1	EE10605040	Electrolytic Cap., 10μF 50V
CE14	1	1	1	EE10605040	Electrolytic Cap., 10μF 50V
CE15	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
CE16	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
CE17	1	1	1	DD15200010	Ceramic Cap., 20pF ±5% 50V CH
CE18	1	1	1	DD15200010	Ceramic Cap., 20pF ±5% 50V CH
CE19	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE20	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CE21	1	1	1	EE33505040	Electrolytic Cap., 3.3μF 50V
CE22	1	1	1	EE33505040	Electrolytic Cap., 3.3μF 50V
CE23	1	1	1	EA10703590	Electrolytic Cap., 100μF 35V
CE24	1	1	1	EA10703590	Electrolytic Cap., 100μF 35V
QE01	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE02	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE03	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE04	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE05	1	1	1	HT320882A0	Transistor, 2SC208[illegible] BL or V
QE06	1	1	1	HT320882A0	Transistor, 2SC208[illegible] BL or V
QE07	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE08	1	1	1	HT109412A0	Transistor, 2SA041 GR or BL
QE09	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE10	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QE11	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
QE12	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
RE01	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W
RE02	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W
RE03	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RE04	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RE05	1	1	1	RT05223140	Resistor, 22kΩ ±5% ¼W
RE06	1	1	1	RT05223140	Resistor, 22kΩ ±5% ¼W
RE07	1	1	1	RT05823140	Resistor, 82kΩ ±5% ¼W
RE08	1	1	1	RT05823140	Resistor, 82kΩ ±5% ¼W
RE09	1	1	1	RT02153140	Resistor, 15kΩ ±2% ¼W
RE10	1	1	1	RT02153140	Resistor, 15kΩ ±2% ¼W
RE11	1	1	1	RT02124140	Resistor, 120kΩ ±2% ¼W
RE12	1	1	1	RT02124140	Resistor, 120kΩ ±2% ¼W
RE13	1	1	1	RT05392140	Resistor, 3.9kΩ ±5% ¼W

- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
RE14	1	1	1	RT05392140	Resistor, 3.9kΩ ±5% ¼W
RE15	1	1	1	RT05471140	Resistor, 470Ω ±5% ¼W
RE16	1	1	1	RT05471140	Resistor, 470Ω ±5% ¼W
RE17	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
RE18	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
RE19	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RE20	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RE21	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W
RE22	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W
RE23	1	1	1	RT05154140	Resistor, 150kΩ ±5% ¼W
RE24	1	1	1	RT05154140	Resistor, 150kΩ ±5% ¼W
RE25	1	1	1	RT05123140	Resistor, 12kΩ ±5% ¼W
RE26	1	1	1	RT05123140	Resistor, 12kΩ ±5% ¼W
RE27	1	1	1	RT05472140	Resistor, 4.7kΩ ±5% ¼W
RE28	1	1	1	RT05472140	Resistor, 4.7kΩ ±5% ¼W
RE29	1	1	1	RT05330140	Resistor, 33Ω ±5% ¼W
RE30	1	1	1	RT05330140	Resistor, 33Ω ±5% ¼W
RE31	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
RE32	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
RE33	1	1	1	GJ05561010	Resistor, 560Ω ±5% 1W
RE34	1	1	1	GJ05561010	Resistor, 560Ω ±5% 1W
CF01	1	1	1	DF15563010	Film Cap., 0.056μF ±5% 50V
CF02	1	1	1	DF15563010	Film Cap., 0.056μF ±5% 50V
CF03	1	1	1	DF15102010	Film Cap., 1000pF ±5% 50V
CF04	1	1	1	DF15102010	Film Cap., 1000pF ±5% 50V
JF01	1	1	1	YP06001040	Plug, 3P Base Post
					PF01 LOUDNESS CONTROL BOARD
PF01	1	1	1	YF29700020	P.W. Board
	1	1	1	ZZ29701020	P.W. Board Assembly
RF01	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
RF02	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
RF03	1	1	1	RT05823140	Resistor, 82kΩ ±5% ¼W
RF04	1	1	1	RT05823140	Resistor, 82kΩ ±5% ¼W
RF05	1	1	1	RG01040060	Variable Resistor, 100kΩ A 250kΩ C
RF06	1	1	1	RM01040180	Variable Resistor, 100kΩ B
CH01	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH02	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH03	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH04	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH05	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH06	1	1	1	DF15104010	Film Cap., 0.1μF ±5% 50V
CH07	1	1	1	DF15152010	Film Cap., 1500pF ±5% 50V
CH08	1	1	1	DF15152010	Film Cap., 1500pF ±5% 50V
CH09	1	1	1	DF15222010	Film Cap., 2200pF ±5% 50V
CH10	1	1	1	DF15222010	Film Cap., 2200pF ±5% 50V
CH11	1	1	1	DF65391010	Film Cap., 390pF ±5% 50V
CH12	1	1	1	DF65391010	Film Cap., 390pF ±5% 50V
CH13	1	1	1	DF17224010	Film Cap., 0.22μF ±10% 35V
CH14	1	1	1	DF17224010	Film Cap., 0.22μF ±10% 35V
CH15	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CH16	1	1	1	DD11050010	Ceramic Cap., 5pF 25V SL
CH17	1	1	1	EE10605040	Electrolytic Cap., 10μF 50V
CH18	1	1	1	EE10605040	Electrolytic Cap., 10μF 50V
CH19	1	1	1	DD15101020	Ceramic Cap., 100pF 50V ±5% TH
CH20	1	1	1	DD15101020	Ceramic Cap., 100pF 50V ±5% TH
CH21	1	1	1	EA47603590	Electrolytic Cap., 47μF 35V

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
CH22	1	1	1	EA47603590	Electrolytic Cap., 47μF 35V
QH01	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
QH02	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
QH03	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
QH04	1	1	1	HT320882A0	Transistor, 2SC2088 BL or V
QH05	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
QH06	1	1	1	HT109412A0	Transistor, 2SA941 GR or BL
RH01	1	1	1	RT05334140	Resistor, 330kΩ ±5% ¼W
RH02	1	1	1	RT05334140	Resistor, 330kΩ ±5% ¼W
RH03	1	1	1	RT05244140	Resistor, 240kΩ ±5% ¼W
RH04	1	1	1	RT05244140	Resistor, 240kΩ ±5% ¼W
RH05	1	1	1	RT05513140	Resistor, 51kΩ ±5% ¼W
RH06	1	1	1	RT05513140	Resistor, 51kΩ ±5% ¼W
RH07	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH08	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH09	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH10	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH11	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH12	1	1	1	RT05113140	Resistor, 11kΩ ±5% ¼W
RH13	1	1	1	RT05115140	Resistor, 1.1MΩ ±5% ¼W
RH14	1	1	1	RT05115140	Resistor, 1.1MΩ ±5% ¼W
RH15	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RH16	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RH17	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RH18	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RH19	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
RH20	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
RH21	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RH22	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RH23	1	1	1	RT05104140	Resistor, 100kΩ ±5% ¼W
RH24	1	1	1	RT05104140	Resistor, 100kΩ ±5% ¼W
RH25	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
RH26	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
RH27	1	1	1	GF05182120	Resistor, 1.8kΩ ±5% ½W
RH28	1	1	1	GF05182120	Resistor, 1.8kΩ ±5% ½W
RH29	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RH30	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RH31	1	1	1	RT05124140	Resistor, 120kΩ ±5% ¼W
RH32	1	1	1	RT05124140	Resistor, 120kΩ ±5% ¼W
JJ01	1	1	1	YP06000400	Plug, 10P
JJ02	1	1	1	YP06000400	Plug, 10P
JJ03	1	1	1	YP06000330	Plug, 3P
JJ04	1	1	1	YP06000400	Plug, 10p
JJ05	1	1	1	YP06000370	Plug, 7P
JJ06	1	1	1	YP06000340	Plug, 4P
JJ07	1	1	1	YP06001050	Plug, 5P Base Post
JJ08	1	1	1	YP10001130	Plug
JJ09	1	1	1	YP10001130	Plug
JJ10	1	1	1	YP10001130	Plug
JJ11	1	1	1	YP10001140	Plug, Wrapping P in
JJ12	1	1	1	YP10001140	Plug, Wrapping P in
JJ13	1	1	1	YP10001130	Plug, Wrapping P in
JJ14	1	1	1	YP10001130	Plug
JJ15	1	1	1	YP10001130	Plug
JJ16	1	1	1	YP10001130	Plug
JJ17	1	1	1	YP10001130	Plug
JJ18	1	1	1	YP10001140	Plug, Wrapping P in

- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
JJ19 ~ JJ26	8	8	8	YP10001130	Plug
JJ27 ~ JJ33	7	7	7	YP10001130	Plug, Wrapping Pin
					PJ01 PRE AMP. BOARD
PJ01	1	1	1	YG24640010	P.W. Board
	1	1	1	ZZ24640010	P.W. Board Assembly
SJ01	1	1	1	SR09050110	Rotary Switch, Selector
SJ02	1	1	1	SR04030190	Rotary Switch, Tape Copy
SJ03	1	1	1	SR04030190	Rotary Switch, Tape Monitor
CN01	1	1	1	EA10701090	Electrolytic Cap., 100μF 10V
CN02	1	1	1	EA10605090	Electrolytic Cap., 10μF 50V
LN01	1	1	1	LY20240120	Relay, 24V
QN01	1	1	1	HT105642H0	Transistor, 2SA564A Q or R
QN02	1	1	1	HT308282H0	Transistor, 2SC828A Q or R
QN03	1	1	1	HD20011010	Diode, W06C
QN04	1	1	1	HD30023090	Zener, WZ071
QN05	1	1	1	HD20011010	Diode, W06C
QN06	1	1	1	HD20003210	Diode, 1S2471
QN07	1	1	1	HD20011010	Diode, W06C
RN01	1	1	1	GJ05821010	Resistor, 820Ω ±5% 1W
RN02	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RN03	1	1	1	RT05154140	Resistor, 150kΩ ±5% ¼W
RN04	1	1	1	RT05104140	Resistor, 100kΩ ±5% ¼W
RN05	1	1	1	RT05753140	Resistor, 75kΩ ±5% ¼W
RN06	1	1	1	RT05103140	Resistor, 10kΩ ±5% ¼W
RN07	1	1	1	GF05472120	Resistor, 4.7kΩ ±5% ½W
RN08	1	1	1	GF05222120	Resistor, 2.2kΩ ±5% ½W
RN09	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
RN10	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
CP01			1	DK18103510	Ceramic Cap., 0.01μF 500V
CP02			1	DK18103510	Ceramic Cap., 0.01μF 500V
FP01			1	FS10031800	Fuse, 315 MA
FP02			1	FS10031800	Fuse, 315 MA
JP01 ~ JP04			4	YJ08000200	Jack
JP05 ~ JP08			4	YP10001130	Plug
					PP01 FUSE BOARD
PP01			1	YF29700010	P.W. Board
			1	ZZ29708010	P.W. Board Assembly
CS05	1	1	1	DF15153010	Film Cap., 0.015μF ±5% 50V
CS06	1	1	1	DF15153010	Film Cap., 0.015μF ±5% 50V
CS07	1	1	1	DF15153010	Film Cap., 0.015μF ±5% 50V
CS08	1	1	1	DF15153010	Film Cap., 0.015μF ±5% 50V
CS09	1	1	1	DF15682010	Film Cap., 6800pF ±5% 50V
CS10	1	1	1	DF15682010	Film Cap., 6800pF ±5% 50V
CS11	1	1	1	DF65391010	Film Cap., 390pF ±5% 50V
CS12	1	1	1	DF65391010	Film Cap., 390pF ±5% 50V
CS13	1	1	1	DF15822010	Film Cap., 8200pF ±5% 50V
CS14	1	1	1	DF15822010	Film Cap., 8200pF ±5% 50V

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
CS15	1	1	1	DD15101020	Ceramic Cap., 100pF ±5% 50V
CS16	1	1	1	DD15101020	Ceramic Cap., 100pF ±5% 50V
CS17	1	1	1	DF15103010	Film Cap., 0.01μF ±5% 50V
CS18	1	1	1	DF15103010	Film Cap., 0.01μF ±5% 50V
CS19	1	1	1	DF15103010	Film Cap., 0.01μF ±5% 50V
CS20	1	1	1	DF15103010	Film Cap., 0.01μF ±5% 50V
CS21	1	1	1	DF15683010	Film Cap., 0.068μF ±5% 50V
CS22	1	1	1	DF15683010	Film Cap., 0.068μF ±5% 50V
CS23	1	1	1	DF15683010	Film Cap., 0.068μF ±5% 50V
CS24	1	1	1	DF15683010	Film Cap., 0.068μF ±5% 50V
CS25	1	1	1	DF15182010	Film Cap., 1800pF ±5% 50V
CS26	1	1	1	DF15182010	Film Cap., 1800pF ±5% 50V
JS01	1	1	1	YJ06000400	Jack, 10P Socket
JS02	1	1	1	YJ06000370	Jack, 7P Socket
JS03	1	1	1	YJ06000370	Jack, 7P Socket
JS04	1	1	1	YP06001090	Plug, 3P Base Post 20mm
JS05	1	1	1	YP10001130	Plug
JS06	1	1	1	YP10001130	Plug
JS07	1	1	1	YP10001130	Plug
					PS01 TONE CONTROL, FILTER BOARD
PS01	1	1	1	YG27700010	P.W. Board
	1	1	1	ZZ29700010	P.W. Board Assembly
RS01	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RS02	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
RS07	1	1	1	RS01040060	Variable Resistor, 100kΩ MN Balance
RS11	1	1	1	RT05183140	Resistor, 18kΩ ±5% ¼W
RS12	1	1	1	RT05183140	Resistor, 18kΩ ±5% ¼W
RS13	1	1	1	RT05183140	Resistor, 18kΩ ±5% ¼W
RS14	1	1	1	RT05183140	Resistor, 18kΩ ±5% ¼W
RS15	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS16	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS17	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS18	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS19	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS20	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS21	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS22	1	1	1	RT05562140	Resistor, 5.6kΩ ±5% ¼W
RS23	1	1	1	RT05273140	Resistor, 27kΩ ±5% ¼W
RS24	1	1	1	RT05273140	Resistor, 27kΩ ±5% ¼W
RS25	1	1	1	RT05273140	Resistor, 27kΩ ±5% ¼W
RS26	1	1	1	RT05273140	Resistor, 27kΩ ±5% ¼W
RS27	1	1	1	RT05392140	Resistor, 3.9kΩ ±5% ¼W
RS28	1	1	1	RT05392140	Resistor, 3.9kΩ ±5% ¼W
RS29	1	1	1	RT05274140	Resistor, 270kΩ ±5% ¼W
RS30	1	1	1	RT05274140	Resistor, 270kΩ ±5% ¼W
RS31	1	1	1	RS01040040	Variable Resistor, 100kΩ B (Bass)
RS32	1	1	1	RS01040040	Variable Resistor, 100kΩ B (Mid)
RS33	1	1	1	RS01040040	Variable Resistor, 100kΩ B (Treble)
RS35	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
RS36	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
RS37	1	1	1	RT05684140	Resistor, 680kΩ ±5% ¼W
RS38	1	1	1	RT05684140	Resistor, 680kΩ ±5% ¼W
RS39	1	1	1	RT05684140	Resistor, 680kΩ ±5% ¼W
RS40	1	1	1	RT05684140	Resistor, 680kΩ ±5% ¼W
RS41	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W
RS42	1	1	1	RT05105140	Resistor, 1MΩ ±5% ¼W

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- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
RS43	1	1	1	RT05182140	Resistor, 1.8kΩ ±5% ¼W
RS44	1	1	1	RT05182140	Resistor, 1.8kΩ ±5% ¼W
RS45	1	1	1	RT05153140	Resistor, 15kΩ ±5% ¼W
RS46	1	1	1	RT05153140	Resistor, 15kΩ ±5% ¼W
RS47	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
RS48	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
SS01	1	1	1	SR04050100	Rotary Switch, Mode Switch
SS02	1	1	1	SP04040170	Pushswitch, Tone, Mode, Def. Muting
SS03	1	1	1	SP04010210	Pushswitch, Low Filter
SS04	1	1	1	SP04010210	Pushswitch, Hi Filter
CV01	1	1	1	DK18203010	Ceramic Cap., 0.02μF 50V
CV02	1	1	1	DK18203010	Ceramic Cap., 0.1μF 50V
CV03	1	1	1	DK18203010	Ceramic Cap., 0.1μF 50V
CV04	1	1	1	DF17104010	Film Cap., 0.1μF 50V
JV01	1	1	1	YT02040270	Terminal, Phono 1, 2, 4P
JV02	1	1	1	YT02040150	Terminal, Tuner, Aux 4P
JV03			1	BY01050060	Jack, 4P + Din Terminal for Tape 1
JV03	1	1		YT02040150	Terminal, Tape 1 4P
JV04			1	BY01050060	Jack, 4P + Din Terminal for Tape 2
JV04	1	1		YT02040150	Terminal, Tape 2 4P
JV05	1	1	1	YT02040150	Terminal, Pre Out 1, 2 4P
JV06	1	1	1	YJ06000400	Jack, 10P Socket
JV07	1	1	1	YJ06000400	Jack, 10P Socket
JV08	1	1	1	YJ06000330	Jack, 3P Socket
JV09	1	1	1	YP10001130	Plug
JV10	1	1	1	YP10001130	Plug
JV11	1	1	1	YP10001130	Plug
					PV01 INPUT TERMINAL BOARD
PV01	1	1	1	YD29700022	P.W. Board
	1	1		ZZ29700020	P.W. Board Assembly
			1	ZZ29708020	P.W. Board Assembly
RV01			1	RT05394140	Resistor, 390kΩ ±5% ¼W
RV02			1	RT05394140	Resistor, 390kΩ ±5% ¼W
RV03			1	RT05394140	Resistor, 390kΩ ±5% ¼W
RV04			1	RT05394140	Resistor, 390kΩ ±5% ¼W
RV05			1	RT05104140	Resistor, 100kΩ ±5% ¼W
RV06			1	RT05104140	Resistor, 100kΩ ±5% ¼W
RV07			1	RT05104140	Resistor, 100kΩ ±5% ¼W
RV08			1	RT05104140	Resistor, 100kΩ ±5% ¼W
JW01	1	1	1	YJ01000860	Jack, Headphones
					PW01 SPKR/HEADPHONE BOARD
PW01	1	1	1	YD29700030	P.W. Board
	1	1	1	ZZ29700030	P.W. Board Assembly
RW01	1	1	1	GJ05331020	Resistor, 330Ω ±5% 2W
RW02	1	1	1	GJ05331020	Resistor, 330Ω ±5% 2W
RW03	1	1	1	GJ05151010	Resistor, 150Ω ±5% 1W
RW04	1	1	1	GJ05151010	Resistor, 150Ω ±5% 1W
SW01	1	1	1	SP02020240	Pushswitch, SPKR
C001		1		BF33300020	Cap. Comp., 0.033μF + 120Ω
C001			1	DF17223800	Film Cap., 0.022μF ±10% 1000V
C002			1	DF17223800	Film Cap., 0.022μF ±10% 1000V
F001			1	FS10031800	Fuse, 315 MA
F001	1	1		FS10050090	Fuse, 0.5A 250V UL
G001	1			BF33300030	Cap. Comp., 0.033μF + 120Ω 125V
J001	1	1	1	YJ01000850	Jack, Mic

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
J002	1	1	1	YJ01000850	Jack, Mic
J003	1	1	1	YT01010050	Terminal, Ground
J004	1	1	1	YT03040160	Terminal, Spkr (Input)
J005	1	1	1	YT03040160	Terminal, Spkr (System 1)
J006	1	1	1	YT03040160	Terminal, Spkr (System 2)
J007	1	1	1	JY05000250	Jack, L.E.D. Socket with wire
J008			1	YJ08000220	Jack, Fuse Holder
J008	1	1		YJ08000230	Jack, Fuse Holder
J009 ~ J012	4	4		YJ04000560	Jack, AC Outlet
J015			1	BY03110010	Plug, Voltage Selector
J016	1	1	1	YJ06001050	Jack, 5P Socket for L.E.D. & Trans.
J017			1	YL09030010	Terminal, 3P Terminal for AC Cord
J017	1	1	1	YU04110010	PF01 + PS01
J018	1	1	1	YJ06001040	Jack, 3P Socket
L001	1	1		TS16012020	Power Transformer
L001			1	TS16012040	Power Transformer
Q001	1	1	1	HI10004030	L.E.D.
S001			1	SP02010250	Pushswitch, Power
S001	1	1		SP02020210	Pushswitch, Power
W001			1	YC01900030	A.C. Power Cord
W001	1	1	1	YC02000160	A.C. Power Cord, SPT-2 125V. 13A
C401	1	1	1	EE47505040	Electrolytic Cap., 4.7μF 50V
C402	1	1	1	EE47505040	Electrolytic Cap., 4.7μF 50V
C403	1	1	1	DF16474510	Film Cap., 0.47μF ± 10% 100V
C404	1	1	1	DF16474510	Film Cap., 0.47μF ± 10% 100V
C405	1	1	1	DD16680010	Ceramic Cap., 68pF ±10% 50V RH
C406	1	1	1	DD16680010	Ceramic Cap., 68pF ±10% 50V RH
C407	1	1	1	DF15152010	Film Cap., 0.0015μF ±5% 50V
C408	1	1	1	DF15152010	Film Cap., 0.0015μF ±5% 50V
C409	1	1	1	DF74472010	Film Cap., 4700pF ±2% 50V
C410	1	1	1	DF74472010	Film Cap., 4700pF ±2% 50V
C411	1	1	1	DF14122010	Film Cap., 1200pF ±2% 50V
C412	1	1	1	DF14122010	Film Cap., 1200pF ±2% 50V
C413	1	1	1	DD15301010	Ceramic Cap., 300pF ±5% 50V
C414	1	1	1	DD15301010	Ceramic Cap., 300pF ±5% 50V
C415	1	1	1	DD15600010	Ceramic Cap., 60pF ±5% 50V
C416	1	1	1	DD15600010	Ceramic Cap., 60pF ±5% 50V
C417	1	1	1	EE10505040	Electrolytic Cap., 1μF 50V
C418	1	1	1	EE10505040	Electrolytic Cap., 1μF 50V
C419	1	1	1	EE10701640	Electrolytic Cap., 100μF 16V
C420	1	1	1	EE10701640	Electrolytic Cap., 100μF 16V
C421	1	1	1	DD16500010	Ceramic Cap., 50pF ±10% 50V SL
C422	1	1	1	DD16500010	Ceramic Cap., 50pF ±10% 50V SL
C423	1	1	1	EE22505040	Electrolytic Cap., 2.2μF 50V
C424	1	1	1	EE22505040	Electrolytic Cap., 2.2μF 50V
C425	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
C426	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
C427	1	1	1	DD16151010	Ceramic Cap., 150pF ±10% 50V
C428	1	1	1	DD16151010	Ceramic Cap., 150pF ±10% 50V
C429	1	1	1	EA47605090	Electrolytic Cap., 47μF 50V
C430	1	1	1	EA47605090	Electrolytic Cap., 47μF 50V
C431	1	1	1	DF16105500	Film Cap., 1μF ±10% 500V
C432	1	1	1	DF16105500	Film Cap., 1μF ±10% 500V
C451	1	1	1	EE47505040	Electrolytic Cap., 4.7μF 50V
C452	1	1	1	EE47505040	Electrolytic Cap., 4.7μF 50V

- (U) for U.S.A.
- (C) for Canada
- (N) for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C453	1	1	1	EA47703590	Electrolytic Cap.,470μF 35V
C454	1	1	1	EA10703590	Electrolytic Cap.,100μF 35V
C455	1	1	1	DF16474510	Film Cap., 0.47μF ±10% 100V
C456	1	1	1	EA47705090	Electrolytic Cap.,470μF 50V
C457	1	1	1	EQ10505010	Electrolytic Cap., 1μF 50V
C458	1	1	1	EQ10505010	Electrolytic Cap., 1μF 50V
Q401	1	1	1	HT109701A0	Transistor, 2SA970 GR
Q402	1	1	1	HT109701A0	Transistor, 2SA970 GR
Q403	1	1	1	HT109701A0	Transistor, 2SA970 GR
Q404	1	1	1	HT109701A0	Transistor, 2SA970 GR
Q405	1	1	1	HT322402A0	Transistor, 2SC2240 GR or BL
Q406	1	1	1	HT322402A0	Transistor, 2SC2240 GR or BL
Q407	1	1	1	HD20003210	Diode, 1S2471
Q408	1	1	1	HD20003210	Diode, 1S2471
Q409	1	1	1	HT322402A0	Transistor, 2SC2240 GR or BL
Q410	1	1	1	HT318852C0	Transistor, 2SC1885 R or S
Q411	1	1	1	HT322402A0	Transistor, 2SC2240 GR or BL
Q412	1	1	1	HT318852C0	Transistor, 2SC1885 R or S
Q451	1	1	1	HF201471A0	F.E.T., 2SK147 GR
Q452	1	1	1	HF201471A0	F.E.T., 2SK147 GR
Q453	1	1	1	HT403302A0	Transistor, 2SD330 D or E
R401	1	1	1	RN05513140	Resistor, 51kΩ ±5% ¼W
R402	1	1	1	RN05513140	Resistor, 51kΩ ±5% ¼W
R403	1	1	1	RN05474140	Resistor, 470kΩ ±5% ¼W
R404	1	1	1	RN05464140	Resistor, 470kΩ ±5% ¼W
R405	1	1	1	RT05331140	Resistor, 330Ω ±5% ¼W
R406	1	1	1	RT05331140	Resistor, 330Ω ±5% ¼W
R411	1	1	1	RN05224140	Resistor, 220kΩ ±5% ¼W
R412	1	1	1	RN05224140	Resistor, 220kΩ ±5% ¼W
R413	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R414	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R415	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R416	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R417	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
R418	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
R419	1	1	1	RT02513140	Resistor, 51kΩ ±2% ¼W
R420	1	1	1	RT02513140	Resistor, 51kΩ ±2% ¼W
R421	1	1	1	RT05683140	Resistor, 68kΩ ±5% ¼W
R422	1	1	1	RT05683140	Resistor, 68kΩ ±5% ¼W
R423	1	1	1	RT02621140	Resistor, 620Ω ±2% ¼W
R424	1	1	1	RT02621140	Resistor, 620Ω ±2% ¼W
R425	1	1	1	RT02624140	Resistor, 620kΩ ±2% ¼W
R426	1	1	1	RT02624140	Resistor, 620kΩ ±2% ¼W
R427	1	1	1	RT05303140	Resistor, 30kΩ ±5% ¼W
R428	1	1	1	RT05303140	Resistor, 30kΩ ±5% ¼W
R429	1	1	1	GU05562120	Resistor, 5.6kΩ ±5% ½W
R430	1	1	1	GU05562120	Resistor, 5.6kΩ ±5% ½W
R431	1	1	1	GF05151140	Resistor, 150Ω ±5% ¼W
R432	1	1	1	GF05151140	Resistor, 150Ω ±5% ¼W
R433	1	1	1	GF05471140	Resistor, 470Ω ±5% ¼W
R434	1	1	1	GF05471140	Resistor, 470Ω ±5% ¼W
R435	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
R436	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
R437	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
R438	1	1	1	RT05221140	Resistor, 220Ω ±5% ¼W
R439	1	1	1	GF05560120	Resistor, 56Ω ±5% ½W
R440	1	1	1	GF05560120	Resistor, 56Ω ±5% ½W

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
R441	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
R442	1	1	1	RT05474140	Resistor, 470kΩ ±5% ¼W
R451	1	1	1	RT05068140	Resistor, 6.8Ω ±5% ¼W
R452	1	1	1	RT05068140	Resistor, 6.8Ω ±5% ¼W
R453	1	1	1	RT05510140	Resistor, 51Ω ±5% ¼W
R454	1	1	1	RT05510140	Resistor, 51Ω ±5% ¼W
R455	1	1	1	GM21220010	Resistor, 2.00kΩ ±2% ½W
R456	1	1	1	GM21220010	Resistor, 2.00kΩ ±2% ½W
R459	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
R460	1	1	1	RT05100140	Resistor, 10Ω ±5% ¼W
R461	1	1	1	RT05222140	Resistor, 2.2kΩ ±5% ¼W
R462	1	1	1	RT05222140	Resistor, 2.2kΩ ±5% ¼W
R463	1	1	1	RN05223140	Resistor, 22kΩ ±5% ¼W
R464	1	1	1	RN05223140	Resistor, 22kΩ ±5% ¼W
R465	1	1	1	RT05471140	Resistor, 470Ω ±5% ¼W
R466	1	1	1	RT05471140	Resistor, 470Ω ±5% ¼W
R467	1	1	1	RT05362140	Resistor, 3.6kΩ ±5% ¼W
R468	1	1	1	RT05392140	Resistor, 3.9kΩ ±5% ¼W
R469	1	1	1	RT05334140	Resistor, 330kΩ ±5% ¼W
R470	1	1	1	RT05334140	Resistor, 330kΩ ±5% ¼W
R471	1	1	1	GF05750140	Resistor, 75Ω ±5% ¼W
C801	1	1	1	EA47706310	Electrolytic Cap.,470μF 63V
C802	1	1	1	EA47706310	Electrolytic Cap.,470μF 63V
C803	1	1	1	EA10701690	Electrolytic Cap.,100μF 16V
C804	1	1	1	EA10701690	Electrolutic Cap.,100μF 16V
C805	1	1	1	DF16102010	Film Cap., 1000pF ±10% 50V
C806	1	1	1	DF16102010	Film Cap., 1000pF ±10% 50V
C807	1	1	1	EA10701690	Electrolytic Cap.,100μF 16V
C808	1	1	1	EA47505090	Electrolytic Cap., 4.7μF 50V
C809	1	1	1	EA47505090	Electrolytic Cap., 4.7μF 50V
C810	1	1	1	EA47605090	Electrolytic Cap., 47μF 50V
C811	1	1	1	EA47605090	Electrolytic Cap., 47μF 50V
C812	1	1	1	DK18103510	Ceramic Cap., 0.01μF 500V YZ
C813	1	1	1	DK18103510	Ceramic Cap., 0.01μF 500V YZ
Q801	1	1	1	HT403132P0	Transistor, 2SD313 Dor E
Q802	1	1	1	HT205072P0	Transistor, 2SB507 D or E
Q803	1	1	1	HT315091Q0	Transistor, 2SC1509 Q
Q804	1	1	1	HT107771Q0	Transistor, 2SA777 Q
Q805	1	1	1	HT315091Q0	Transistor, 2SC1509 Q
Q806	1	1	1	HT107771Q0	Transistor, 2SA777 Q
Q807	1	1	1	HD30023090	Zener, WZ071
Q808	1	1	1	HD20003210	Diode, 1S2471
Q809	1	1	1	HD20013030	Diode, DS133B
Q810	1	1	1	HD20013030	Diode, DS133B
R801	1	1	1	GJ05010010	Resistor, 1Ω ±5% 1W
R802	1	1	1	GJ05010010	Resistor, 1Ω ±5% 1W
R803	1	1	1	RT05822140	Resistor, 8.2kΩ ±5% ¼W
R804	1	1	1	RT05822140	Resistor, 8.2kΩ ±5% ¼W
R805	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R806	1	1	1	RT05682140	Resistor, 6.8kΩ ±5% ¼W
R807	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
R808	1	1	1	RT05102140	Resistor, 1kΩ ±5% ¼W
R809	1	1	1	GF05472120	Resistor, 4.7kΩ ±5% ½W
R810	1	1	1	RT05122140	Resistor, 1.2kΩ ±5% ¼W
R811	1	1	1	RT05393140	Resistor, 39kΩ ±5% ¼W
R812	1	1	1	RT05393140	Resistor, 39kΩ ±5% ¼W
R813	1	1	1	RT05363140	Resistor, 36kΩ ±5% ¼W
R814	1	1	1	RT05752140	Resistor, 7.5kΩ ±5% ¼W

12. TECHNICAL SPECIFICATIONS

FOR U.S.A. MODEL ONLY

Rated Output Level	3 Volts RMS
Total Harmonic Distortion (THD), 20 Hz to 20 kHz at Rated Output Level	0.01%
Intermodulation (IM) Distortion at Rated Output	0.01%
Phono Section	
Input Overload at 1 kHz (MM)	220 mV
THD (100 mV Input at 1 kHz)	0.01%
Equivalent Input Noise ("A" Weighted)	
Phono (MM)	0.24 μV
Phono (MC)	0.04 μV
Dynamic Range ("A" Weighted)	
Phono (MM)	120 dB
Input Sensitivity (ref. Output 1.5 V)	
Phono (MM)	1.8 mV
Phono (MC)	90 μV
Input Impedance	
Phono (MM)	47 k ohms
Phono (MC)	40 ohms
Input Capacitance	100 pF
Frequency Response, RIAA 20 Hz to 20 kHz	±0.2 dB
Signal to Noise Ratio (ref. to rated output and 7.75 mV input "PHONO MM" or 0.375 mV input "PHONO MC" at 1 kHz, "A" weighted)	
Phono (MM)	90 dB
Phono (MC)	80 dB
High Level Inputs (Aux, Tape, and Tuner)	
Input Sensitivity (ref. Output 1.5 V)	180 mV
Input Impedance	30 k ohms
Frequency Response	
20 Hz ~ 20 kHz	±0.1 dB
5 Hz ~ 60 kHz	±1.0 dB
Signal-to-Noise Ratio (ref.to Rated Output and 775 mV input, "A" weighted)	98 dB
Output Levels	
Tape Out (ref. to 7.75 mV at Phono Inputs)	775 mV
Pre Out (ref. to 180 mV at Aux Inputs)	1.5 V
(ref. to 500 mV at Aux Inputs)	4.2 V
Output Impedance	
Tape Out (Phono Mode)	270 ohms
Pre Out	220 ohms
General	
Power Requirements	120 VAC, 60 Hz
Power Consumption	11 Watts
Dimensions (WxHxD)	16-3/8" x 5-3/4" x 9-3/4" (416mm x 146mm x 247mm)
Weight	
Unit Alone	14.5 lbs (6.6 kg)
Packed for Shipment	17.6 lbs (8.0 kg)

FOR EUROPEAN MODEL ONLY

AUDIO SECTION

TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT	**0.005%**
I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1)	**0.003%**
Frequency Response	
Phono (RIAA)	±0.2 dB
Aux (±1 dB)	7 Hz~100 kHz
Signal-to-Noise Ratio (IHF, MC)	
Phono: (MM) at 3 V output	90 dB
(MC) at 3 V output	80 dB
Aux	98 dB
Input Terminals	
Phono: Input Impedance (MM)	47 k ohms
Input Capacitance	100 pF
Input Sensitivity (MM)	1.8 mV
Aux: Input Impedance	30 k ohms
Input Sensitivity	180 mV
Phono Equivalent Input Noise (MM)(IHF-A)	0.24 μV
Phono Dynamic Range (Ratio of input overload to equivalent input noise)	120 dB
Channel Balance (0 to −40 dB/40 Hz~16 kHz)	
Phono	1.0 dB
Aux	1.0 dB
Interchannel Crosstalk	
Phono 1 kHz	51 dB
Aux 1 kHz	56 dB
Tape 1 kHz	48 dB
Intersource Crosstalk (Worst Point)	
1 kHz	53 dB
Output Voltage, 1 kHz	
Tape Out (Input: Phono 7.75 mV)	775 mV
Pre Out (Input: Aux 180 mV)	1500 mV
Output Impedance, 1 kHz	
Tape Out	330 ohms
Pre Out	220 ohms

GENERAL

Power Requirements	220 V AC, 50 Hz (N version is featuring an external voltage selector for use on 110/120/240 V. Other versions can be converted by a qualified technician to operate on 110/120/240 V.)
Power Consumption at Rated Output, Both Channels Operating	11 W
Semiconductor Complement	
Transistors	37
Diodes	33
Field Effect Transistors	3
Dimensions	
Panel Width	16-3/8" (416 mm)
Panel Height	5-3/4" (146 mm)
Depth	9-3/4" (247 mm)
Weight	
Unit alone	14.5 lbs (6.6 kg)
Packed for shipment	17.6 lbs (8.0 kg)

marantz

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